

Figure 1

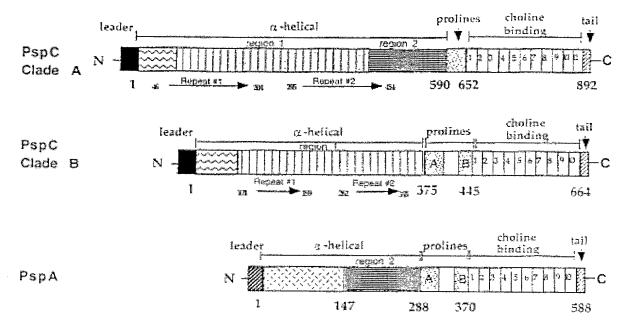


Figure 2

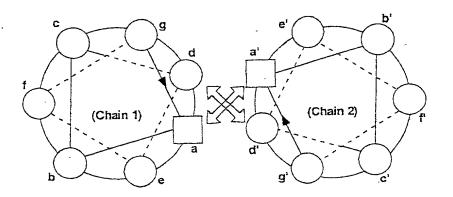


Figure 3

1. Identify Potential epitopes in PspA from Clinically Revelant Strains

Strain BG 8743 (Sterotype 23F) defgabcdefgab LEK**DVEDFKNSDGE**QAEQVL (SEQ ID NO: 10) Residues 290-301

Strain EF5668 (Sterotype 4) defgabcdefgabcd LEDNLKDAETNNVED (SEQ ID NO: 11) Residues 330-344

Strain BG 8090 (Sterotype 19F)

defgabcdef LAKKQTELEK (SEQ ID NO: 12) Residues 267-276

2. Splice Epitopes Together

DVEDFKNSDGELEDNLKDAETNNVEDAKKQTELEK (SEQ ID NO: 13)

3. Replace a and d Positions (underlined)

DIEDLKNSIGELEDNIKELETNIVELAKKITELEK (SEQ ID NO: 14)

Figure 4

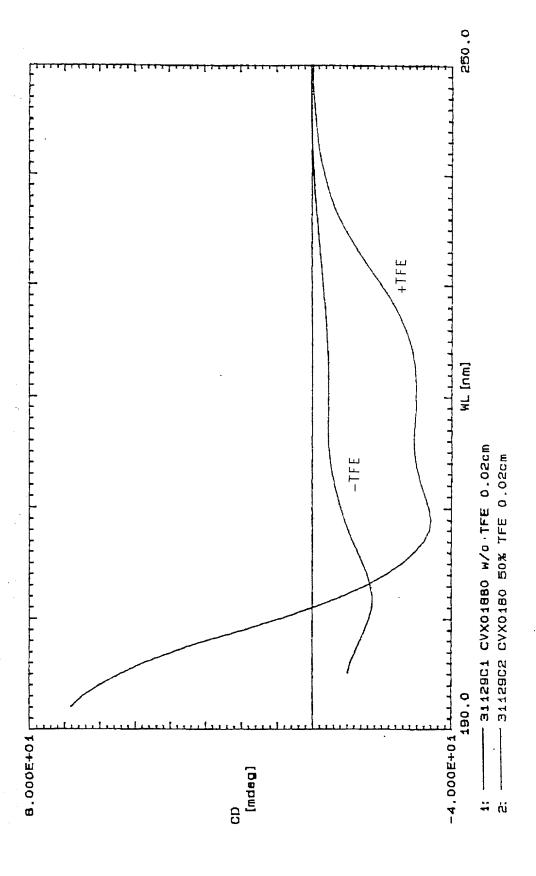
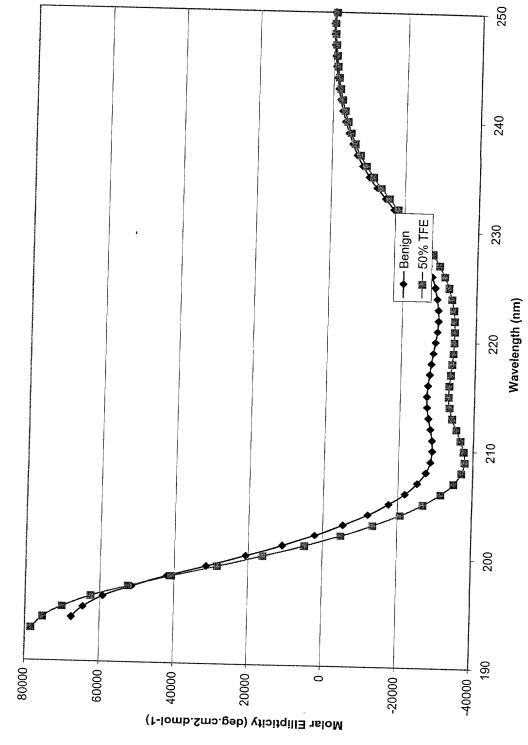


Figure 5

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Consensus
           --E----E-L--KIDELD-EIA-LEK-V---E---K---E-Y--
                                                                79
           -- - E----E-ESDREDELDAETAKEEKNV---E-DF-KNSNGEQ-AEQY-R
BG6692
                                                                299
           --E---E-Lsokideddaelakuekny---E-df-knsngeq-âeqy-r
Strain 23
                                                                135
           --E---E-ESDKIDELDAFTAKLEKDY--E-DF-KNSDGEY-SAEY-L
Strain SP
                                                                135
Strain SP
           --E---E-ESDKIDGEDAETAKTEKDY---E-DF-KNSDGEY-SALY-L
                                                                135
           --E--E-ESDKIDEIDAEIAKOEKNV---E-DF-KNSNGEQ-AEGY-R
BG8838
                                                                299
               ---E-ESDKIDELDAFFAKTEKNV---E-DF-KNSNGEQ-AEOY-R
strain 13
                                                                95
           --E---A-EQNKVADLENKVAELDKEVTRLQSDL-KDAEENN-VEDVVK
Strain SP
                                                                127
           --E---A-EQNKVADEENKVAELDKEVTRLQSDL-KDAEENN-VE SVVK
Strain 18
                                                                98
           --E---E-ASDRODEGDADTAKTEKDV---E-DF-KNSDGEQ-AEOVLV
BG8743
                                                                307
              ----E-Lsdkipeldaetaktekdv---e-df-knsdceo-aecylv
Strain 16
                                                                143
Strain 90
           --E---E-ESDKTDEIDADIAKLEKDV---E-DF-KNSDGEQ-AEOYLV
                                                                121
           --E--E-ESDKEDEEDAETAKLEKOV---E-DF-KNSDGEQ-ÆEGYLV
Strain 13
                                                                120
           --A---E-EDKKADELQNKVADEEKEISNEEILL-GGADEE---DDT--
Strain 11
                                                                86
           --A---E-ENKKVESEQNKVADEEKEISNEEILL-GGADEE---DDT--
Strain 43
                                                                99
           --E---E-ESDKIDETDARTAKTEKOV---E-DF-KNSDGEQ-A-OVLV
Strain 23
                                                                84
           AAEA---E-INKKVEAEQNQVAEEEELSKEEDNL-KDAETNN-VEDVIK
BG11703
                                                                366
BG7817
           AABA---E-NKKVEALONOVAEFEEELSKIEDNL-KDAETNN-VEDVIK
                                                                366
           --E---E-ESDKTPETDAFFAKTERDV---E-DF-KNSDGEQ-AEÓYLV
Strain 18
                                                                122
BG9739
           --E---E-ESDKIDETDAETAKTEKDV---E-DF-KNSDGEQ-AGQYL-
                                                                283
              ----E-ESDETDEDAETAKEKDY---E-DF-KNSDGEQ-AGQYL-
L81905
                                                               283
           --E---E-SDKIDERDAETAKEKDV--E-DF-KNSGGGY-SAEYL-
PspA AC94
                                                               280
                --E-LSDKIDETDAETAKLEKOV---E-DF-KNSDCEQ-JEOYLV
Strain 15
                                                               145
           AAEDANIEAEQNKVADIENKVAELDKEVTRLQSDL-KDAEENN-VEDVVK
ATCC6303
                                                               348
           BG7561
                                                               366
           AAEA---E-IDKKADELQNKVADLEKEISNEILL-GGADEE---DDT--
Strain 23
                                                               133
           AAEA---E-EDKKADELQNKVADIEKEISNEEILL-GGADEE---DDT--
Strain 18
                                                               135
           AAEDANIEAEQNKVADEENKVAELDKENTRLQSDL-KDAEENN-VEDYVK
SP 222
                                                               127
BG9163
              297
              ----E-Esgki fetdaetaele--v---q--l-kdaegnnnveayfk
EF6796
                                                               296
           AAEA--E-LOKKADELQNKVADLEKEISNLEILL-GGADEE---DDT--
BG8090
                                                               414
          AEDA---E-DOKKADELQNKVADEREISNEEILL-GGADSE---DDT--
EF3296
                                                               413
Rx1
           --E----E-ESDKEDEIDAETAKEE-D---Q--L-KAAEENNNVE BYFK
                                                               261
           --E---E-ESDKIDELDAETAKTEKNV---EY-F-KKTDAEO-TEOYL-
DBL1
                                                               283
          AABA---E-INEKVEADQNQVAETEEELSKEDNL-KDAETNN-VE DVIK
EF5668
                                                               347
          --E---E-ESDKIDEEDAETAKEE-D----Q--L-KAVEENNNVEDYST
Wu2
                                                               290
EF10197
          --E---E-LSDKIDELDAETAKTE-D---Q--L-KAAEENNNVEDYFK
                                                               282
          AEEA---E-EDKKADELQNKVADEEKEISNEEILL-GGADSE---DDT--
PspA AC12
                                                               321
DBL5
          --E---E-ESGET FETDARTAETE -- W---Q--L-KDAEGNNNVE XVFK
                                                               284
          --EEDRRNYPTNTYKTEDIETAESDVKVKEAELELVKEEAKESRNEEKVK
DBL6A
                                                              · 366
          GEETLILA-IQNKISDIDDKIAEAEKKLADSQ-----NGEG-VEDYWT
BG6380
                                                               303
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Figure 6

Figure 7: CD Spectrum of CVX0270



Thermal Denaturation of Peptide CVX0270 Figure 8:

